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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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of

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	Complete if Known
Application Number	09/779,202
Filing Date	February 07, 2001
First Named Inventor	JIAN-BING FAN et al.
Group Art Unit	1645 1634
Examiner Name	NOT YET ASSIGNED
Attorney Docket Number	A-69850-1/DJB/RMS/DCF

					U.S. PATENT DOC	UMENTS	
Examiner Initials*		Cite No.1	U.S. Patent D		Name of Patentee or Applicant	Date of Publication of Cited Document	Pages, Columns, Lines, Where Relevant
			Number	Kind Code <sup>2</sup> (if known)	of Cited Document	MM-DD-YYYY	. Passages or Relevant Figures Appear
1		1	4,200,110		Peterson et al.	4/1980	
	/	2	4,499,052		Fulwyler	2/1985	
	_/	3	4,682,895		Costello	7/1987	
	_/	4	4,785,814	· .	Kane	11/1988	
		5	4,822,746		Walt	4/1989	
	V	6	4,824,789		Yafuso et al.	4/1989	
		7	4,999,306		Yafuso et al.	3/1991	
	>	8	5,002,867		Macevicz	3/1991	
	\	9	5,028,545		Soini	7/1991	
		10	5,105,305		Betzig et al.	4/1992	
		11	5,114,864		Walt	5/1992	
		12	5,132,242		Cheung	7/1992	
		13	5,143,853		Walt	9/1992	
		14	5,194,300		Cheung	3/1993	
1		15	5,244,636		Walt et al.	9/1993	

					FOREIGN PATENT DOCUMEN	₹TS		
Examiner	Cite No.1	Foreign	n Patent Documen	nt	Name of Patentee or Applicant of Cited Document	Date of Publication of	Pages, Columns, Lines, Where Relevant	
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W	16	EP	0 269 764			6/1988		
IV	17	EP	0 392 546			10/1990		
V	18	EP	0 478 319			4/1992		
V	19	EP	0 723 146			7/1996		
TV	20	wo	89/11101			11/1989		
7	21	WO	93/02360			2/1993		-
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	23	wo	97/14028			4/1997		-}
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·		Number	Kind Code <sup>2</sup> (if known)	of Cited Document	MM-DD-YYYY	Passages or Relevant Figures Appear
W	27	5,244,813		Walt et al.	9/1993	
	28	5,250,264		Walt et al.	10/1993	
	29	5,252,494		Walt	10/1993	
J	30	5,254,477		Walt	10/1993	
<b>/</b>	31	5,298,741		Walt et al.	3/1994	
<b>/</b>	32	5,302,509		Cheeseman	4/1994	
	33	5,320,814		Walt et al.	6/1994	
<b>~</b>	34	5,357,590		Auracher	10/1994	
<b>I</b>	35	5,380,489		Sutton et al.	1/1995	
	36	5,435,724		Goodman et al.	7/1995	
<b>V</b>	37	5,474,895		Ishii et al.	12/1995	
	38	5,481,629		Tabuchi	1/1996	
1	39	5,494,798		Gerdt et al.	2/1996	
TV	40	5,496,997		Pope	3/1996	
	41	5,512,490		Walt et al.	4/1996	
	42	5,516,635		Ekins et al.	5/1996	
V	43	5,565,324		Still et al.	10/1996	

						FOREIGN PATENT DOCUMEN	vts		
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		47	wo	99/18434			4/1999		
		48	wo	99/60170			11/1999		
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Attorney Docket Number	A-69850-1/DIB/RMS/DCF					

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w	53	5,573,909		Singer et al.	11/1996	
1 /	54	5,575,849		Honda et al.	11/1996	
	55	5,633,972		Walt et al.	5/1997	
<b>/</b>	56	5,639,603		Dower et al.	6/1997	
	57	5,656,241		Seifert et al.	8/1997	
	58	5,690,894		Pinkel et al.	11/1997	
/	59	5,814,524		Walt	10/1998	
/	60	5,840,256		Demers et al.	11/1998	
	61	5,854,684		Stabile et al.	12/1998	
/	62	5,863,708		Zanzucchi et al.	1/1999	
	63	5,888,723		Sutton et al.	3/1999	
	64	5,900,481		Lough et al.	5/1999	
	65	6,023,540		Walt et al.	2/2000	
/	66	5,679,524		Nikiforov et al.	10/1997	
	67	5,856,083		Chelsky et al.	01/1999	
W	68	5,858,732		Solomon et al.	01/1999	

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<b>\</b>	73	wo	00/63437				10/2000		
<b>V</b>	74	WO	00/71243				11/2000		
	75	WO	00/71995				11/2000		
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					Application Number	09/779,202		
INFORMATION DISCLOSURE					Filing Date	February 07, 2001		
STA	TEMENT !	BY A	PPLICA	NT	First Named Inventor	JIAN-BING FAN et al.		
(use as many sheets as necessary)					Group Art Unit 1645 1634			
					Examiner Name	NOT YET ASSIGNED		
Sheet	4	of	6		Attorney Docket Number	A-69850-1/DJB/RMS/DCF		

Attorney Docket Number

A-69850-1/DJB/RMS/DCF

				U.S. PATENT DOC	UMENTS	
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Initials*		Number	Kind Code <sup>1</sup> (If known)	of Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear
NJ	77	6,013,456		Akgavan-Tafti	01/2000	
	78	6,051,380		Sosnowski et al.	04/2000 -	
	79	6,110,678		Weisburg et al.	08/2000	
	80	6,172,218	B1	Brenner	01/2001	
	81	6,083,763		Balch	07/2000	
	82	5,854,033		Lizardi	12/1998	
V	83	5,554,516		Kacian et al.	09/1996	
	84	5,541,311		Dahlberg et al.	07/1996	
<b>V</b>	85	5,660,988		Duck et al.	08/1997 -	
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Examiner Initials*	Cite No.1	Foreign Office <sup>3</sup>	Patent Docum	kind Code <sup>2</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
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Examiner Date Signature Considered

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	09/779,202				
Filing Date	February 07, 2001				
First Named Inventor	JIAN-BING FAN et al.				
Group Art Unit	1645 (634				
Examiner Name	NOT YET ASSIGNED				
Attorney Docket Number	A-69850-1/DJB/RMS/DCF				

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T			
N	87	Abel et al., "Fiber-Optic Evanescent Wave Biosensor for the Detection of Oligonucleotides," Anal. Chem. 68:2905-2912 (1996).				
	88	Anonymous, "Microsphere Selection Guide," Bandg Laboratories, (Fisher, In) September 1998.	F			
	89	Anonymous, "Fluorescent Microspheres," Tech. Note 19, Bang Laboratories, (Fishers, In) February 1997.	L			
	90	Bangs, L.B., "Immunological Applications of Microspheres," The Latex Course, Bangs Laboratories (Carmel, IN) April 1996.				
	91	Barnard et al., "A Fibre-Optic Chemical Sensor with Discrete Sensing Sites," Nature, 353:338-340 (September 1991).	L			
	92	Chen et al., "A Microsphere-Based Assay for Multiplexed Single Nucleotide Polymorphism Analysis Using Single Base Chain Extension," Genome Research, 10(4):549-557 (2000).	L			
	93 Czarnik, "Illuminating the SNP Genomic Code," Modern Drug Discovery, 1(2): 49-55 (1998)					
	94	Drmanac, R. et al., "Sequencing by Oligonucleotide Hybridization: A Promising Framework in Decoding of the Genome Program," The First International Conference on Electrophoresis, Supercomputing and the Human Genome, Proceeding os th April 10-13, 1990 Conference at Florida State University. Ed. C. Cantor and H. Lim.				
	95	Drmanac, R. et al., "Prospects for a Miniaturized, Simplified and Frugal Human Genome Project," Scientia Yugoslavica, 16(1-2):97-107 (1990).	L			
	96	Drmanac, R. et al., "Sequencing by Hybridization (SBH) with Oligonucleotide Probes as an Integral Approach for the Analysis of Complex Genomes," International Journal of Genome Research, 1(1):59-79 (1992).				
	97	Drmanac, R. et al., "Sequencing by Hybridization," Automated DNA Sequencing and Analysis, ed. M. Adams, C. Fields and J. Venter. (1994).				
	98	Ferguson et al., "A Fiber-Optic DNA Biosensor Microarray for the Analysis of Gene Expression," Nature Biotechnology, 14:1681-1684 (1996).	L			
	99	Fuh et al., "Single Fibre Optic Fluorescence pH Probe," Analyst, 112:1159-1163 (1987).	L			
	101	Healey et al., "Improved Fiber-Optic Chemical Sensor for Penicillin," Anal. Chem. 67(24):4471-4476 (1995).				
	102	Healey et al., "Development of a Penicillin Biosensor Using a Single Optical Imaging Fiber," SPIE Proc. 2388:568-573 (1995).	F			
	103	Healey et al., "Fiberoptic DNA Sensor Array Capable of Detecting Point Mutations," Analytical Biochemistry, 251:270-279 (1997).	-			
	104	Hirschfeld et al., "Laser-Fiber-Optic "Optrode" for Real Time In Vivo Blood Carbon Dioxide Level Monitoring," Journal of Lightwave Technology, LT-5(?):1027-1033 (1987).	L			
$\sqrt{}$	105	Iannone et al., "Multiplexed Single Nucleotide Polymorphism Genotyping by Oligonucleotide Ligation and Flow Cytometry," Cytometry, 39:131-140 (2000).	L			
		×				

Examiner Signature	Tule	<u>u</u>	Date Considered	6	101	/2003

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Sheet 6 of 6

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	. (	Complete if Known
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E	Filing Date	February 07, 2001
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		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	TAMA INAAL MAGAZIAA AMMAAL FARIOL MAMAACIIMA COLULA AMAACI NA AMAACI WALAA INAAL CILA MITARAFICI						
w	106	Michael et al., "Making Sensors out of Disarray: Optical Sensor Microarrays," Proc. SPIE, 3270: 34-41 (1998).	-				
	107	Michael et al., "Randomly Ordered Addressable High-Density Optical Sensor Arrays," Anal. Chem. 70(7): 1242-1248 (April 1998).	-				
Michael et al., "Fabrication of Micro- and Nanostructures Using Optical Imaging Fibers and the Chemical Sensors," Proc. 3rd Intl. Symp., Microstructures and Microfabricated Systems, ed. P.J. Hesketh, et al., v. 97-5, Electrochem. Soc., 152-157 (Aug. 1997).							
109 Mignani, et al., "In-Vivo Biomedical Monitoring by Fiber-Optic Systems," Journal of Lightwave Technology, 13(7): 1396-1406 (1995).							
110 Pantano et al., "Ordered Nanowell Arrays," Chem. Mater., 8(12): 2832-2835 (1996).							
	111	Peterson et al., "Fiber-Optic Sensors for Biomedical Applications," Science, 13:123-127 (1984).	Ŀ				
	112	Peterson, J. et al., "Fiber Optic pH Probe for Physiological Use," Anal. Chem., 52:864-869 (1980).	Ŀ				
Piunno et al., "Fiber-Optic DNA Sensor for Fluorometric Nucleic Acid Determination," At 67:2635-2643 (1995).							
	114	Pope, E. "Fiber Optic Chemical Microsensors Employing Optically Active Silica Microspehres," SPIE, 2388:245-256 (1995).					
	115	Strachan et al., "A Rapid General Method for the Identification of PCR Products Using a Fibre-Optic Biosensor and its Application to the Detection of Listeria," Letters in Applied Microbiology, 21:5-9 (1995).					
	116	Walt, D. "Fiber Optic Imaging Sensors," Accounts of Chemical Research, 31(5): 267-278 (1998).					
	117	Walt, "Fiber-Optic Sensors for Continuous Clinical Monitoring," Proc. IEEE, 80(6): 903-911 (1992).	ŀ				
	118	Lyamichev et al., "Polymorphism identification and quantitative detection of genomic DNA by invasive cleavage of oligonucleotide probes," Nature Biotechnolgoy, 17:292-296 (1999).	ŀ				
	119	Metzker et al., "Termination of DNA synthesis by novel 3'-modified-deoxyribonucleoside 5'- triphosphates," Nucleic Acids Research, 22(20):4259-4267 (1994).	-				
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<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English Language Translation is attached.

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Examiner Initials*	Cite No.	U.S. Patent I	Document	Name of Patentee or Applicant	Date of Publication of	Pages, Columns, Lines, Where Relevant
muais -		Number	Kind Code <sup>2</sup> (if known)	•	Cited Document MM-DD-YYYY 02/1996	Passages or Relevant Figures Appear
W	1	5,494,810				
1/	2	5,604,097		Brenner	02/1997	
	3	5,632,957		Heller et al.	05/1997	
_	4	5,763,175		Brenner	06/1998	
1-	5	5,780,231		Brenner	07/1998	
	6	5,795,714		Cantor et al.	08/1998	
	7	5,830,711		Barany et al.	11/1998	
	8_	5,976,797		Mitsuhashi	11/1999	
	9	6,027,889		Barany et al.	02/2000	
	10	6,054,564		Barany et al.	04/2000	
W-	11	6,096,496		Frankel	08/2000	
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					FOREIGN PATENT DOCUME	VIS		
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u-	12	wo	93/25563	A1	City of Hope	12/1993		
	13	wo	94/02515	Al	Bunsen Rush Laboratories Inc.	02/1994		
-	14	wo	95/21271	A1	Molecular Tool Inc.	08/1995		
	15	WO	95/16918	Al	Combichem Inc.	06/1995		-
	16	WO	96/15271	Al	Abbott Laboratories	05/1996		1
-	17	wo	96/30392	A1	Ciba-Geigy AG	10/1996		1
	18	wo	97/31256	A2	Cornell Research Foundation, Inc.	08/1997		-
$\overline{V}$	19	wo	97/45559	Al	Cornell Research Foundation, Inc.	12/1997		1

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w	20	6,251,639	BI	Kurn	06/2001	
	21	6,268,148	Bl	Barany et al.	07/2001	
-	22	6,274,323	B1	Bruchez et al.	08/2001	
V-	23	6,284,465	B1	Wolber	09/2001	
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					FOREIGN PATENT DOCUMEN	VTS		
Examiner Initials*	No.	Foreign Patent Document  Kind Code* Office3 Number* (if known)			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	J.
w	24	wo	97/46704	Al	Lynx Therapeutics Inc.	12/1997		-
	25	WO	98/04746	Al	Mount Sinai School of Medicine of the City University of New York	02/1998		
1	26	wo	98/13523	Al	Pyrose-Quencing AB	04/1998		
	27	wo	98/31836	Al	Hyseq Inc.	07/1998		
_	28	wo	99/39001	A2	Amersham Pharmacia Biotech	08/1999		-
_	29	WO	99/64867	Al	Amersham Pharmacia Biotech	12/1999		1
	30	WO	00/58516	A2	whitehead Institute for Biomedical Research	10/2000		
<b>√</b> −	31	WO	00/71992	Al	Illumina Inc.	11/2000		
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Unique citation designation number. <sup>1</sup> See attached Kinds of U.S. Patent Documents. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Impanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. Applicant is to place a check mark here if English Language Translation is attached.

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u-	32	Baner et al., "Signal amplification of padlock probes by rolling circle replication," Nucleic Acids Research, 26(22): 5073-5078 (1998).	-
1	33	Lizardi et al., "Mutation detection and single-molecule counting using isothermal rolling-circle amplification," Nature Genetics, 19: 225-232 (July 1998).	F
	34	Ronaghi et al., "A Sequencing Method Based on Real-Time Pyrophosphate," Science, 281:363-365 (1998).	-
_	35	Shoemaker et al., "Quantitative phenotypic analysis of yeast deletion mutants using a highly parallel molecular bar-coding strategy," Nature Genetics, 14:450-456 (1996).	
V -	36	Syvanen, Anne-Christine. "From gels to chips: "Minisequencing" Primer Extension for Analysis of Point Mutations and Single Nucleotide Polymorphisms," Human Mutation, 13:1-10 (1999).	F
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<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English Language Translation is attached.

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	Examiner Initials*	Cite No.	U.S. Patent D	locument	Name of Patentee or Applicant of Cited Document	Date of Publication of	Pages, Columns, Lines, Where Relevant			
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Į	W	1	5,494,810		Barany et al.	02/1996				
	1/	2	5,604,097		Brenner	02/1997				
		3	5,632,957		Heller et al.	05/1997				
Ī		4	5,763,175		Brenner	06/1998				
ı		5	5,780,231		Brenner	07/1998				
I	- 6		5,795,714		Cantor et al.	08/1998				
		7	5,830,711		Barany et al.	11/1998				
	1-	8	5,976,797		Mitsuhashi	11/1999				
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in.	ritials*		Office3	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)	of Cited Document	Cited Document MM-DD-YYYY		
1	v	12	wo	93/25563	A1	City of Hope	12/1993		
1		13	wo	94/02515	A1	Bunsen Rush Laboratories Inc.	02/1994		
Π		14	wo	95/21271	Al	Molecular Tool Inc.	08/1995		
П		15	wo	95/16918	Al	Combichem Inc.	06/1995		
П		16	WO	96/15271	Al	Abbott Laboratories	05/1996		
П		17	WO	96/30392	Al	Ciba-Geigy AG	10/1996		
П		18	WO	97/31256	A2	Cornell Research Foundation, Inc.	08/1997 .		
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Unique citation designation number. 2 See attached Kinds of U.S. Patent Documents. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 4 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 4 Applicant is to place a check mark here if English Language Translation is attached.

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the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number. Complete if Known Substitute for form 1449A/PTO **Application Number** 09/779,202 February 07, 2001 NFORMATION DISCLOSURE Filing Date First Named Inventor FAN et al. ATEMENT BY APPLICANT Group Art Unit 1645 Not Yet Assigned Examiner Name (Lise as many sheets as necessary) FADERITY PADERITY of **Attorney Docket** A-69850-1/DJB/RMS/DCF Number U.S. PATENT DOCUMENTS U.S. Patent Document Pages, Columns, Lines, Name of Patentee or Applicant of Cited Document Examiner Date of Publication of No. Where Relevant Initials\* Cited Document Passages or Relevant Kind Code<sup>2</sup> Number MM-DD-YYYY Figures Appear (if known) 6,251,639 20 BI Kum 06/2001 6,268,148 21 Barany et al. BI 07/2001

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Bruchez et al.

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u-	24	WO	97/46704	Al	Lynx Therapeutics Inc.	12/1997		工
	25	wo	98/04746	A1	Mount Sinai School of Medicine of the City University of New York	02/1998		1
	26	wo	98/13523	Al	Pyrose-Quencing AB	04/1998		广
	27	wo	98/31836	A1	Hyseq Inc.	07/1998		工
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<b>√</b>	32			al amplification of padle 5073-5078 (1998).	ock probes by rolling circ	le replication," Nucleic Acids	
	33			tation detection and singular ture Genetics, 19: 225-2		ing isothermal rolling-circle	
	34	Ronaghi et al., "A Sequencing Method Based on Real-Time Pyrophosphate," Science, 281:363-365 (1998).					口
	35	Shoemaker e			c analysis of yeast deleticenetics, 14:450-456 (1996	on mutants using a highly parallel	1-1
/-	36	Syvanen, Anne-Christine. "From gels to chips: "Minisequencing" Primer Extension for Analysis of Point Mutations and Single Nucleotide Polymorphisms," Human Mutation, 13:1-10 (1999).					
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